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# Drivers of PGA in RA near-remission

## Figures and Tables

**Table 1** – Demographic and clinical characteristics of 1588 RA patients

	RAID	COMEDRA	CoimBRA	All patients
	n=348	n=936	n=304	n=1588
Age <sup>a</sup> , years, mean (SD)	55.9 (12.9)	57.6 (11.1)	59.4 (12.4)	57.6 (11.8)
Female gender <sup>a</sup> , n (%)	262 (75.9)	742 (79.3)	249 (81.9)	1253 (79.1)
Disease duration <sup>a</sup> , years, mean (SD)	12.7 (10.6)	13.5 (9.8)	11.9 (9.0)	13.0 (9.8)
Current biologic agents, n (%)	174 (50.0)	699 (74.7)	95 (31.3)	968 (61.0)
HAQ <sup>a</sup> (0-3), mean (SD) <sub>SEP</sub>	1.18 (0.76)	0.40 (0.46)	1.09 (0.74)	0.70 (0.70)
TJC28 (0-28), mean (SD) <sub>SEP</sub>	5.5 (6.5)	3.3 (4.2)	1.4 (2.9)	3.4 (4.8)
SJC28 (0-28), mean (SD) <sub>SEP</sub>	3.7 (4.5)	2.2 (3.1)	1.4 (2.5)	2.4 (3.4)
CRP (mg/dl), mean (SD) <sub>SEP</sub>	1.1 (1.6)	0.5 (1.3)	0.8 (1.4)	0.7 (1.4)
PhGA <sup>a</sup> (0-10), mean (SD) <sub>SEP</sub>	3.4 (2.4)	2.3 (1.7)	1.3 (1.5)	2.4 (2.0)
DAS28-ESR(4v) <sup>a</sup> (0-9.4), mean (SD) <sub>SEP</sub>	4.0 (1.6)	3.1 (1.3)	2.8 (1.2)	3.2 (1.4)
Disease activity states, n (%)				
3v-remission <sup>b</sup>	71 (20.4)	283 (30.2)	144 (47.4)	498 (31.4)
Remission <sup>c</sup>	21 (6.0)	146 (15.6)	28 (9.2)	195 (12.3)
Near-remission <sup>d</sup>	50 (14.4)	137 (14.6)	116 (38.2)	303 (19.1)
Non-remission	277 (79.6)	653 (69.8)	160 (52.6)	1090 (68.6)
PGA (0-10), mean (SD) <sub>SEP</sub>	4.2 (2.5)	2.9 (2.1)	4.4 (2.7)	3.5 (2.4)
Pain (0-10), mean (SD) <sub>SEP</sub>	4.7 (2.7)	3.0 (2.2)	4.9 (2.5)	3.7 (2.5)
Function (0-10), mean (SD) <sub>SEP</sub>	4.5 (2.6)	2.8 (2.3)	4.9 (2.6)	3.6 (2.6)
Fatigue (0-10), mean (SD)	4.7 (2.7)	2.8 (2.7)	5.1 (2.7)	4.3 (2.8)
Sleep (0-10), mean (SD)	3.9 (3.0)	2.6 (2.7)	4.3 (2.8)	3.2 (2.9)
Physical wellbeing (0-10), mean (SD)	4.4 (2.5)	3.2 (2.3)	4.9 (2.4)	3.8 (2.5)
Emotional wellbeing (0-10), mean (SD)	3.7 (2.6)	2.8 (2.5)	4.6 (2.6)	3.4 (2.7)
Coping (0-10), mean (SD) <sub>SEP</sub>	3.8 (2.5)	2.4 (2.3)	4.2 (2.6)	3.0 (2.5)
Full RAID Score (0-10), mean (SD)	4.3 (2.2)	3.0 (2.0)	4.7 (2.3)	3.6 (2.3)

<sup>a</sup>Missing data concerned to <10% of patients. <sup>b</sup>3v-remission = TJC28, SJC28, and CRP mg/dl all ≤1; PGA not considered. It equates to merge " Remission" and " Near-remission" disease states. <sup>c</sup>Remission = TJC28, SJC28, CRP mg/dl, and PGA all ≤1. <sup>d</sup>Near-remission = TJC28, SJC28, and CRP mg/dl all ≤1;

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PGA>1. CRP: C-reactive protein; DAS28: Disease Activity Score using 28 joints; PGA: patient global assessment; RAID: Rheumatoid Arthritis Impact of Disease; SJC28: swollen joint counts using 28 joints; TJC28: tender joint counts using 28 joints.

**Table 2** - Disease impact domains comparison according to disease activity states.

Domains	A. Remission <sup>a</sup>		B. Near-remission <sup>b</sup>		C. Non-Remission		p-value	
	n=195		n=303		n=1090			
	Mean (SD)	% ≤1	Mean (SD)	% ≤1	Mean (SD)	% ≤1	A vs B	B vs C
Fatigue	1.3 (1.9)	69	4.4 (2.4)	10	4.8 (2.7)	14	<0.001	0.050
Physical wellbeing	1.1 (1.5)	76	3.9 (2.0)	9	4.3 (2.4)	14	<0.001	0.012
Emotional wellbeing	1.0 (1.7)	80	3.6 (2.3)	22	3.7 (2.7)	24	<0.001	0.430
Sleep	1.0 (1.7)	80	3.5 (2.7)	28	3.6 (2.9)	31	<0.001	0.468
Pain	0.9 (1.2)	82	3.7 (2.1)	12	4.3 (2.4)	14	<0.001	<0.001
Function	0.8 (1.1)	81	3.6 (2.2)	14	4.1 (2.6)	17	<0.001	0.002
Coping	0.6 (1.2)	88	3.2 (2.3)	25	3.4 (2.5)	28	<0.001	0.324
RAID Score	0.9 (1.0)	67	3.7 (1.9)	5	4.1 (2.2)	8	<0.001	0.008
PGA	0.5 (0.5)	100	3.6 (1.9)	0	4.0 (2.4)	15	<0.001	0.008

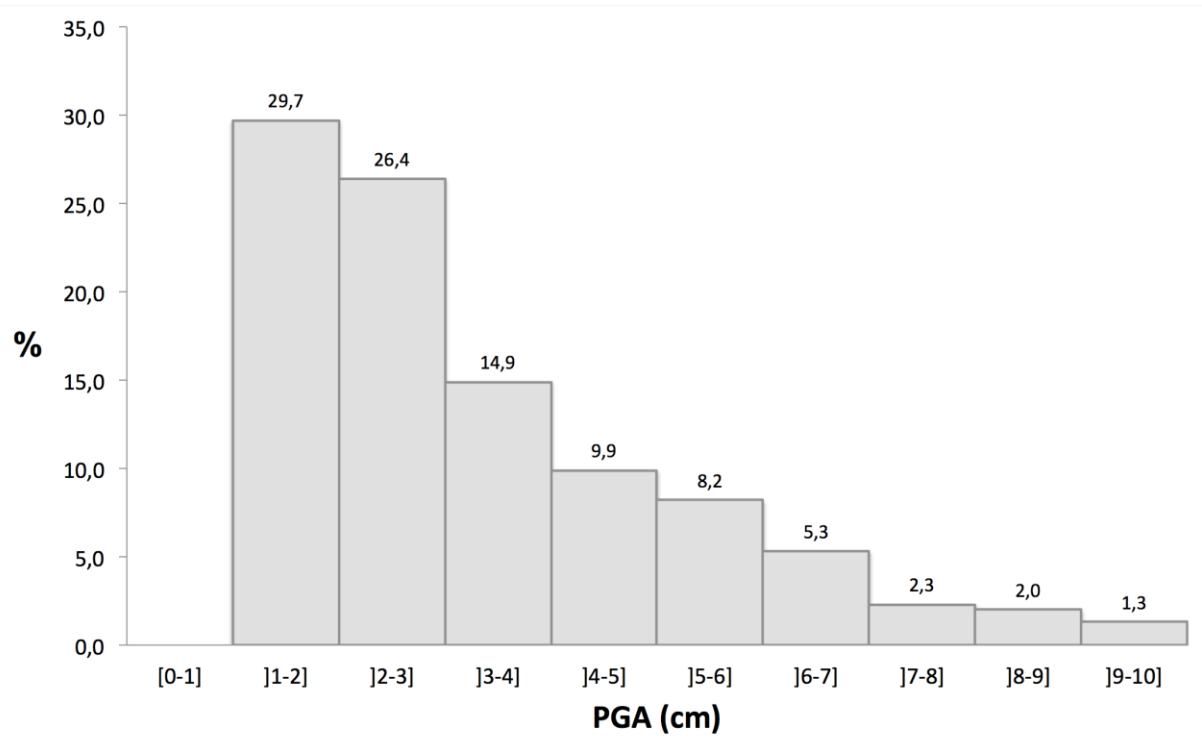
Domains in descending order by mean values in remission state. All domains are scored 0-10. Each column presents mean (SD) values and the percentage of patients that scored each domain below 1. p-values according to Student's t test. <sup>a</sup>Remission = TJC28, SJC28, CRP mg/dl, and PGA all ≤1. <sup>b</sup>Near-remission = TJC28, SJC28, and CRP mg/dl all ≤1; PGA>1. PGA: patient global assessment; RAID: Rheumatoid Arthritis Impact of Disease.

## Drivers of PGA in RA near-remission

### Supplementary data

**Supplementary Figure S1** - Distribution of PGA in near-remission (only PGA>1)

patients (n=303)



# Drivers of PGA in RA near-remission

**Supplementary Table S1** - Disease impact domains in 3v-remission patients

Domains	3v-remission <sup>a</sup>	
	n=498	
	Mean (SD)	% ≤1
Fatigue	3.2 (2.7)	33
Physical wellbeing	2.8 (2.3)	35
Emotional wellbeing	2.6 (2.5)	45
Sleep	2.5 (2.7)	48
Pain	2.6 (2.2)	39
Function	2.5 (2.3)	40
Coping	2.2 (2.3)	50
RAID Score	2.6 (2.1)	29
PGA	2.4 (2.2)	39

All domains are scored 0-10. Each column presents mean (SD) values and the percentage of patients that scored each domain below 1. <sup>a</sup>3v-remission = TJC28, SJC28, and CRP mg/dl all ≤1; PGA not considered. PGA: patient global assessment; RAID: Rheumatoid Arthritis Impact of Disease.

# Drivers of PGA in RA near-remission

**Supplementary Table S2** - Univariable and multivariable analyses to explain PGA in near-remission (only PGA>1) patients using disease impact domains as explanatory factors (n=303).

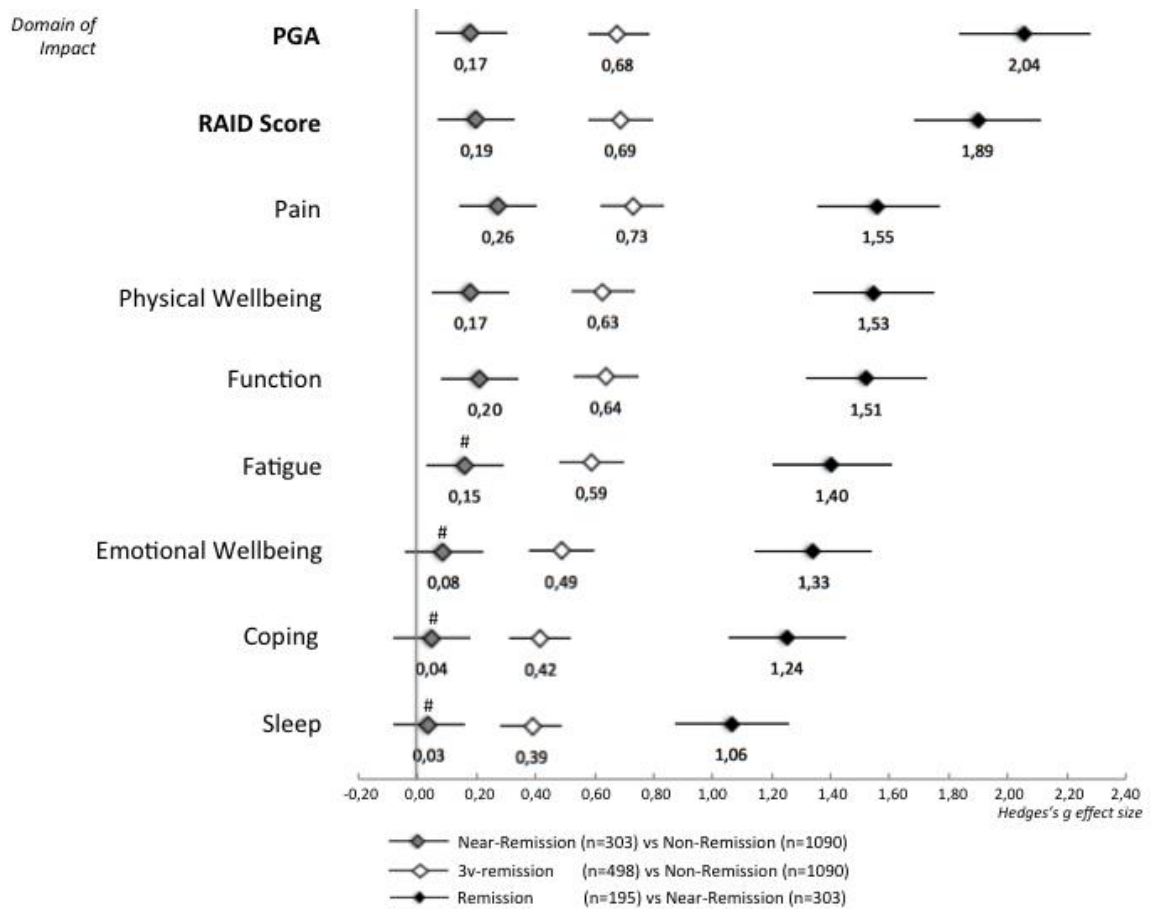
Domains	Pearson's correlation		Linear Regression <sup>a</sup>	
	r	p-value	$\beta$ adjusted	p-value
Pain	0.68	<0.001	0.29	<0.001
Function	0.67	<0.001	0.23	0.001
Physical Wellbeing	0.65	<0.001	0.19	0.006
Fatigue	0.59	<0.001	0.15	0.010
Coping	0.57	<0.001	--	--
Sleep	0.49	<0.001	--	--
Emotional Wellbeing	0.47	<0.001	--	--

Domains in descendent order of Pearson's correlation coefficient.

All domains scored 0-10. <sup>a</sup>R<sup>2</sup><sub>adjusted</sub>=0.55.

## Drivers of PGA in RA near-remission

**Supplementary Figure S2 - Hedges' g effect sizes of disease impact domains to discriminate between disease activity states.**



Domains in descending order of black diamonds. Each diamond represents the effect size, i.e. the strength/magnitude of the mean difference between two groups (represented by different grey scales). All mean differences except the represented with a cardinal (#) were statistically significant. The horizontal bars represent the 95% confidence interval of the effect size. General guidelines to interpret effect sizes classify them as small (<0.2), medium (0.5) and large (>0.8). PGA: patient global assessment; RAID: Rheumatoid Arthritis Impact of Disease.